

**To:** Griswold, Hays[Griswold.Hays@epa.gov]  
**From:** Matt Francis  
**Sent:** Tue 9/1/2015 2:33:14 AM  
**Subject:** Fwd: Planning Level Budget  
[image001.png](#)  
[MES Gold Kine Bypass Adit and Bulkhead Budgetary Estimate, Rev 1.0.pdf](#)

Sent via the Samsung Galaxy Note® 3, an AT&T 4G LTE smartphone

----- Original message -----

From: Mark Levin <mark.levin@minenv.com>  
Date: 08/31/2015 8:30 PM (GMT-07:00)  
To: Matt Francis <m.francis@erllc.com>, "Way, Steven" <way.steven@epa.gov>  
Cc: Allen Sorenson - DNR <allen.sorenson@state.co.us>  
Subject: Planning Level Budget

Hi Matt and Steve:

Here is a planning level budget for the alternative of driving a new bypass adit segment and design/install a bulkhead for the Gold King.

This work should be able to be done in 3 months, to the point of bulkhead pumping. Contact grouting would follow later, after the concrete has completed its curing/shrinkage.

To dispel the notion that this can't be done in fall and winter - MES worked at the Revenue mine 20/7 through the worst of last winter, missing only a few days waiting for avalanche control, and access to that site is MUCH scarier than to the Gold King. Similarly, MES operated the Equity mine 24/7 near Creede through two severe winters, with only a few avalanche control days. If this project were to commence rapidly, avalanche control costs could be avoided, I think, as the work could be substantially complete before Christmas.

I have used a notional distance of 750 feet. I understand from Matt Francis that good maps and survey data is available for the Gold King – this could be checked against the plan view map to determine the actual distanced required. An azimuth and elevation from a new portal to the desired intersection with the old works would need to be laid out, of course, and good survey control is essential.

There are some advantages to driving a new adit segment:

- 1) Ground control can be installed promptly after drill/blast excavation, before significant relaxation of the rockmass – this and the use of modern rockbolts and other fixtures should provide better stability for long term bulkhead surveillance access.
- 2) Rehab is essentially foot by foot custom work and costs are difficult to predict – much like fixing up an old car or house, but move the decimal a few places. Rehabilitation to a standard sufficient for long term surveillance access may likely be much more costly than systematic new construction.

3) New bypass adit will be out of the main water flow, thus minimizing sludge disturbance and the need to handle excavated sludge. Similarly, old pipes, timbers, rail, etc. will not need to be handled and disposed of.

4) New bypass adit segment will be easier to systematically ventilate, without risk of exhalation of bad air from old workings with barometric changes.

5) Improved access (recommended 10' x 10') reduces bulkhead construction cost.

This could save a lot of money in water treatment all winter long, and you'll probably have to do this anyway, so why not now?

Even if the choice is to try to rehab the old works, or gain safe inspection access and then decide after seeing what shape things are in, it still makes sense to move forward to do the bulkhead as rapidly as possible.

Think about it....

Mark Levin, P.E.

General Manager

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